

a spot at base of whiskers blackish. Postauricular patch large, prominent, brilliant ochraceous rufous. Hands and feet rich tawny rufous; a few brown hairs at the base of the claw of the hallux. Tail tawny rufous, the basal fourth of the hairs slaty; tip of tail with a few black hairs.

Skull rather smaller than that of *marica*, the teeth, on the contrary, rather larger. General characters, and noticeably the smoothness and roundness of the braincase, quite similar.

Dimensions of the type (measured by Mr. Mackenzie in the flesh).—Head and Body, 341 mm.; tail, 341; hindfoot, 62; ear, 39. Skull.—Greatest length, 61; condylo-incisive length, 55·5; zygomatic breadth, 41·5; nasals, 18 × 11·5; palatilar length, 27·5; palatal foramen, 4; upper molar series, exclusive of p^3 , 13·3.

Hab.—Chin Hills, 50 miles, West of Kindat. Alt. 5,000 feet.

Type.—Adult female B. M. No. 16.3.26.14. Original number 349. Collected 26th April 1915 by Mr. Mackenzie, I.F.S. Presented to the National Museum by the Bombay Natural History Society. Two specimens, adult and young, obtained.

This beautiful Flying Squirrel is named in honour of Mrs. Milard, wife of the Society's Honorary Secretary. It represents a group of the genus not hitherto found in British India, its only near relations being the *P. marica* of Yunnan, and *P. punctatus* of Malacca, species which, as noted in the description of the former, differ widely from the ordinary heavy-skulled members of *Petaurista*, and approach some of the larger species of *Pteromys** (subgenus *Hylopetes*). It is undoubtedly most nearly allied to *P. marica*, but differs by the practical absence of white spots, by its head not being more blackish than its back, by the greater size of the postauricular patches, and by its feet being almost wholly rufous. Hereafter intermediate links may be found to occur, but for the present we cannot assume their existence, and therefore use a binomial name for it.

G.—NEW RODENTS FROM SIKKIM.

BY R. C. WROUGHTON.

1.—A NEW *CALLOSCIURUS* OF THE *ERYTHRAEUS* GROUP.

In the Sikkim Collection, Mr. Crump obtained a squirrel, of which there is no representative in the National Collection, and which, so far as I can discover, has never been described. I propose to call it after Mr. Crump, who has done such good and successful work for the Mammal Survey.

* That is of *Sciuropterus*, as they have been called until recently.

Callosciurus crumpi, sp. n.

A *Callosciurus* of the *erythraeus* group, but differing from all other members of it in having the underparts not red, but grizzled more or less like the back.

Size as in *erythraeus*. Fur soft and close, about 15-20 mm. long on the back.

General colour above a grizzle of black and yellow, giving a general olivaceous effect, finer on the flanks, coarser on the dorsal area where also the yellow element in the grizzle becomes a bright "ochraceous." The individual hairs black, with three rings of "ochraceous" or "ochraceous buff," the under fur "slate colour." Below grizzled like the flanks, but still more finely, the lateral areas of the abdomen more yellow than the median darkening posteriorly, until the inguinal area is almost "hazel." Face in front of the eyes "ferruginous." Feet finely grizzled. Tail grizzled like the back, but more coarsely for three-fourths of its length, the remainder forming a black tassel.

Skull as in *erythraeus*.

Dimensions of the type:—Head and body, 205; tail, 193; hindfoot, 49; ear 20 mm. Skull:—Greatest length, 53; condylo-basal length, 48.5; brain case breadth 24; interorbital breadth, 19.5; nasals length, 16; cheek teeth, 11; diastema, 11.5.

Habitat.—Sedonchen, Sikkim, 6,500 ft.

Type.—Adult male. B.M. No. 15.9.1.103. Original number, 5785. Collected by Mr. C. A. Crump, on the 17th November, 1914, and presented to the National Collection by the Bombay Natural History Society.

Mr. Crump obtained altogether eight specimens, all at the same place, and he did not I understand see the species anywhere else.

2.—A NEW *DREMOMYS* FROM SIKKIM.

In the Sikkim Collection, Mr. Crump obtained a series of 24 specimens of *Dremomys*, 11 from the west, and 13 from the east of the Tista River. On laying these out it was at once apparent that there were present two distinct forms, the one from the west of an olive colour, strongly suffused with bright ochraceous, the other from the west of a dark grey, almost black colouring. Each of these series is remarkably constant in colouring, specimens from places so close together as Lachen and Chuntang being as markedly distinct as some from Sukiapokhri, on the Nepal border, from others from the neighbourhood of the Jelap La on the Bhotan frontier and nowhere is there any trace of "intergrading." Unfortunately there is one specimen labelled "Sedonchen" which is quite indistinguishable from west Sikkim specimens. Personally I am of opinion that this is due to some unfortunate mistake in

labelling, but, until we have proof that this is so, I do not feel justified in ranking the new form as other than a subspecies of *lokriah*. The western series corresponds in all particulars with Hodgson's co-types of that species and with a series of about a score of other specimens collected by Hodgson in Nepal, and by Blanford and others in Sikkim. It may therefore be confidently accepted as true *lokriah*. The eastern series I propose to call

Dremomys lokriah bhotia, sp. n.

A *Dremomys* resembling *lokriah* in all structural characters, but lacking entirely the suffusion of ochraceous which marks that species.

Size and fur quite as in *lokriah*. General colour above darker than in true *lokriah*, the grizzle much finer. The individual hairs black, with a subterminal ring (about 1mm.) of "ochraceous buff," in *lokriah* the hairs have two rings, each of them double the width of the single ring in the present form. The face in front of the eyes and feet show an excessively fine grey grizzle, without any sign of yellow. Below bright "ochraceous" as in *lokriah lokriah*.

Dimensions (recorded by the collector):—Head and body, 171; tail, 134; hindfoot, 44; ear, 21. Skull:—Greatest length, 50.5; condylo-basal length, 45; nasals, 15; diastema, 13; cheek teeth, 8.5.

Habitat.—Eastern Sikkim, the type from Sedonchen.

Type.—An adult male. B. M. No. 15.9.1.125. Original number, 5775. Collected by Mr. C. A. Crump, on the 14th November, 1914, and presented to the National Collection by the Bombay Natural History Society.

With the Chindwin Collection we received two specimens (unfortunately both immature) from the Chin Hills which seem to belong to the present race, but on the other hand there are two specimens from Manipur, collected by Hume, which correspond the one with *lokriah lokriah* and the other with *lokriah bhotia*. However until we have more material from Assam, there is little use in speculating on the distribution of the two races.

3.—THE RATS OF THE *FULVESCENS* GROUP IN SIKKIM.

Epimys fulvescens was described by Gray, from Nepal, in 1846. Hodgson gave it the names *caudatior* and *octomammis*, but both these names were later in date and moreover were *nomina nuda*. In 1863, Blyth described *jerdoni* on a specimen collected in Sikkim by Dr. Jerdon, his description is very brief, and though his type is not available to me for examination, his description so closely parallels that of Gray that I have no doubt in considering it as identical with *fulvescens*, of which *jerdoni* is therefore a synonym.

A second species from Nepal was named and described under the name *niviventer*, by Hodgson, in 1836. In the Kumaon Collection we received specimens of this rat which agreed well with Hodgson's type, in all these the underside was entirely pure white. We have now, in this Sikkim Collection, a series of a rat which, while closely resembling *niviventer* in most characters differs in having a dark area on the middle of the back, from forehead to tail, and in having a collar, which is extended in the median line, the whole length of the abdomen, of the same colour as the back. I add below a description of this animal under the name *Epimys lepcha*.

Finally Mr. Crump obtained a series of a small rat which I believe to be undescribed and I add a description of it under the name *Epimys eha*.

The following key may help in discriminating between the members of this group of Nepal-Sikkim rats. I may note here that we have received in our Collections from Burma some individuals of this group which are recorded in the reports as *Epimys jerdoni*, but from what I have said above it is evident that they have been wrongly labelled. I would have included them in this review of the group were it not that there is a species, *cinnamomeus*, named by Blyth from Shwe-gyen, of which we have no specimen for reference:—

KEY.

A.—General colour above “ochraceous.”

- a. Larger, head and body,
130-140, skull, 36.
Under surface pure
white *E. fulvescens*, Gray.
- b. Smaller, head and body,
110-115, skull, 32.
Under surface greyish,
individual hairs slate
with white tips *E. eha*, sp. n.

B.—General colour above greyish brown, “hair brown.”

- a. Under surface pure white... *E. niviventer*, Hodgson.
- b. Dark gorget and median
streak on abdomen ... *E. lepcha*, sp. n.

Epimys eha, sp. n.

A rather small species of the *fulvescens* group, recognisable among all the other species of the group by the black ‘spectacles’ round the eyes and the long close hair of the under surface, the individual hairs being slate coloured with short white tips, giving a general grey effect.

Fur above finer, softer, and closer than in *fulvescens*, not longer (about 5 mm.), entirely without spines. General colour above bright "clay colour," not quite so bright as "ochraceous," darker and duller in the middle region of the back; below greyish white; (all the hairs dark slate colour at their bases, tipped with ochraceous on the flanks, and with white on the whole under surface) a sharp line of distinction between the colour of the flanks and that of the under surface. Face with dark rings round the eyes, produced forward to meet in an acute angle at the tip of the nose, the cheeks outside this triangle, and as far back as the eyes, whitish grey like the throat, the remainder ochraceous. The feet dark to the bases of the toes, the toes themselves white. Tail dark above, white below, clothed sparsely with short, adpressed, black hairs, which become very appreciably longer towards the end of the tail, but not enough to form a tuft.

Skull markedly smaller than in *fulvescens*, the supraorbital ridges much less marked, scarcely more than indicated, teeth very much smaller. Zygomatic plates not produced forward, not visible from above.

Dimensions of the type:—(Those of the body taken in the flesh by the collector). Head and body, 115; tail, 186; hindfoot, 26; ear 20. Skull:—Greatest length, 32; condylo-basal length, 29; brain-case breadth, 13·8; interorbital breadth, 5; nasals length, 11; diastema, 8·5; palatal foramina, 6; tooth row, 5.

Habitat.—Sikkim. (Type from Lachen. Alt. 8,800 feet.)

Type.—Old male. B. M. No. 15. 9. 1. 189. Original number, 6107.

Collected by Mr. Crump, on the 30th of December, 1914. Presented to the National Collection by the Bombay Natural History Society. This small rat seems to be widely distributed in Sikkim. Among the 21 specimens obtained, there are individuals from Ghoom and Sukiapokhri in the south, to Thangu (Alt. 10,000 feet) in the extreme north.

I have named this very distinct species in memory of my old friend the late E. H. Aitken, who conjointly with Mr. H. M. Phipson, founded the Bombay Natural History Society. I have used his nom-de-plume "Eha," under which he is known to such a wide circle by his books on the Field Natural History of the Bombay Presidency.

Epimys lepcha, sp. n.

A member of the *fulvescens* group, rather larger than *eha*, with a comparatively shorter tail, most nearly related to *niviventer*, from which it differs most notably by its dark throat and median abdominal line.

Fur soft and close, without spines. General colour above "hair brown," very dark, almost black along the median dorsal line, more and more tinged with "ochraceous buff" towards the flanks, below pure white, with a collar at the base of the throat, extended backwards along the median line of the abdomen, the same colour as the back, the line of division of the upper and under surfaces, along the sides, sharply marked. Feet white. Tail dark above, pale below, often with a white tip, sparsely clothed with short, adpressed, black hairs, the terminal one-sixth further with longer finer, white hairs.

Skull slightly longer, and markedly narrower than in *fulvescens*, tooth row slightly shorter.

Dimensions of the type:—(Those of the body taken in the flesh by the collector). Head and body, 133; tail, 170; hindfoot, 28; ear, 22. Skull:—Greatest length, 37.5; condylo-basal length, 34; brain case breadth, 14.5; interorbital breadth, 6; nasals length, 15; diastema 9.5; palatal foramina, 6; tooth row, 5.3.

Habitat—Sikkim. (Type from Chuntang. Alt. 5,350 feet.)

Type.—Old female. B. M. No. 15. 9. 1. 185. Original number, 5968. Collected by Mr. Crump, on the 17th December, 1914. Presented to the National Collection by the Bombay Natural History Society.

Mr. Crump obtained this species only at Chuntang and Lachen, at between 5,000 and 9,000 feet altitude, where he got a series of 18 specimens. The specimens of *niviventer* obtained by him in Kumaon were found at about the same altitude. No specimens of *niviventer* were found in Sikkim nor of *lepcha* in Kumaon.

4.—THE LOCAL RACES OF *FUNAMBULUS PENNANTI*.

Some years ago I pointed out in this Journal (Vol. XVI., p. 406, 1905) that *Funambulus palmarum* and *pennanti* were two quite distinct species and at the same time I described a local race of *pennanti*, from Rawal Pindi, under the name of *argentescens*. In the Collections of the Mammal Survey, a large number (more than 250 specimens) of *pennanti* have been received from a dozen different localities and of these only one series turns out to be the northern form *argentescens*, viz., that from Sind, while all the rest have in the Survey Reports been classed as *F. pennanti pennanti*. On laying out all these specimens it became evident that there is another local form, at and round Palanpur, which is quite distinct from both true *pennanti* and *p. argentescens*, I propose to call it

Funambulus pennanti lutescens, sub. sp. nov.

A *Funambulus* rather smaller than true *pennanti*, about the size of *argentescens*, but much paler than either of these two forms.

Size and fur as in *argentescens*. General colour above pale 'cream buff' on the flanks, the saddle near 'mars brown' (individual hairs 'cinnamon' with dark bases and tips, mixed with quite a large proportion of longer black hairs), the five longitudinal stripes white, very slightly tinged with buff, the lateral pair scarcely distinguishable on the pale flank. Face drab. Hands and feet buffy white like the dorsal stripes. Below white, the hairs white to their bases. Tail also pale buffy white, each hair with two black rings, the one near the base, the other subterminal broader.

Dimensions:—Head and body, 140; tail, 141; hindfoot, 35; ear, 17. Skull:—Greatest length, 38; basilar length, 28; zygomatic breadth, 21; interorbital breadth, 105; length of nasals, 10.5; diastema, 8; length of upper tooth row, 7.

Habitat.—Deesa, Palanpur.

Type.—Adult female. B. M. No. 13.9.18.105. Original number 3138, collected by Mr. C. A. Crump, on the 29th April, 1913. Presented to the National Collection by the Bombay Natural History Society.

The specimens from Deesa and several other places in the Palanpur State are all fairly typical, those however from Mt. Abu (4,300 feet) are darker and more richly coloured. This form ranges south as far as the northern part of Kathiawar, but thereafter the specimens grow darker in increasingly large numbers, and commence to show a passage to true *pennanti*.